

CLAIM AMENDMENTS

Please amend the claims as follows:

1. (Original): An agropolymer comprising a carbohydrate and/or silica matrix obtained from an agricultural crop selected from the group consisting of *Oryza sativa*, *Panicum miliaceum*, *Setaria italica*, *Cajanus cajan*, *Vigna mungo*, *Vigna radiata*, *Triticum sp.*, *Ricinus communis*, *Helianthus annuus*, *Gossypium sp.*, and *Arachis sp.*, said carbohydrate and/or silica matrix being substantially devoid of proteins, tannins and polyphenols, said matrix further comprising metal binding reactive sites.

2. (Original): The agropolymer of claim 1, wherein said carbohydrate and/or silica matrix is obtained from plant parts of said agricultural crop, said plant parts being selected from the group consisting of seed coats, seed covers, hulls, and husks.

3. (Original): The agropolymer of claim 2, wherein said plant parts are micronized, and wherein said micronized plant parts are treated with ferric chloride and dried, said treated micronized plant parts subsequently being subjected to infrared spectroscopy, thereby revealing reactive, organometallic bonds.

4. (Currently amended): The agropolymer of claim 3, wherein said micronized plant parts are derived from a husk of *Triticum sp.*, and wherein said plant parts, after undergoing infrared spectroscopy reveal organometallic bonds at 2360 ± 10 and 2340 ± 10 wave numbers (cm^{-1}).

5. (Currently amended): The agropolymer of claim 3, wherein said micronized plant parts are derived from a member of the group consisting of a seed coat of *Gossypium sp* and a seed coat of *Vigna radiata*, and wherein said plant parts, after first undergoing alkaline hydrogen peroxide treatment, reveal organometallic bonds, through infrared spectroscopy at 2360 ± 10 and 2340 ± 10 wave numbers (cm^{-1}).

6. (Currently amended): The agropolymer of claim 3, wherein said micronized plant parts are derived from a member of the group consisting of a seed coat of *Panicum miliaceum*, a seed coat of *Setaria italica*, a seed coat of *Cajanus cajan*, a seed coat of *Vigna mungo*, a seed coat of *Ricinus communis*, and a seed coat of *Helianthus annus*, and wherein said plant parts, after first undergoing alkaline hydrogen peroxide treatment, reveal organometallic bonds characteristic of said plant parts.
